AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough; and 2. added matter is shown by underlining.

1. (Original) A method for removing one or more selected gas components from a gas stream which comprises: bringing the gas stream into contact with a liquid including a solvent or a reagent for a selected component in a first turbulent contactor; subjecting the gas stream and the liquid to turbulent mixing conditions in the contactor thereby causing a selected gas component to be absorbed by a respective solvent or reagent in the liquid; passing the fluid mixture into a second turbulent contactor; and subjecting the fluid mixture to further turbulent mixing conditions in the second contactor, thereby causing further absorption of the same selected gas component, or absorption of another selected gas component, by a respective solvent or reagent; the method being a continuous process with the gas stream and liquid flowing co-currently, and at least one of the turbulent contactors comprising a vessel having a gas inlet, a liquid inlet, an outlet leading to a venturi passage, and a tube extending from the outlet back into the vessel.

2. (Currently Amended)) A method as claimed in Claim 1, in which the tube is perforated and/or is spaced from the periphery of the outlet, or is both perforated and spaced from the periphery of the outlet.

3. (Previously Amended) A method as claimed in Claim 1, in which the gas mixture is supplied to the tube and the liquid is supplied to the vessel, whereby the gas mixture draws the liquid into the venturi and the two phases are mixed.

4. (Previously Amended) A method as claimed in Claim 1, in which the gas mixture is supplied to the vessel and the liquid is supplied to the tube, whereby the gas is drawn into the venturi by the liquid and the two phases are mixed.

5. (Previously Amended) A method as claimed in Claim 1, in which the liquid and the gas mixture are supplied to the vessel, the liquid being supplied to a level above the level of the outlet, whereby the gas is forced out through the outlet via the tube, thereby drawing the liquid into the venturi so that the two phases are mixed.

6. (Original) A method as claimed in Claim 1, in which the first turbulent mixing is conducted in a jet pump.

7. (Previously Amended) A method as claimed in Claim 1, in which the second contactor is located in a pipe extending from the venturi section of the first contactor.

8. (Previously Amended) A method as claimed in Claim 1, in which the fluid mixture is separated into a gas phase and a liquid phase between the two contactors, the phase separation preferably occurring in an annular flow generator.

9. (Previously Amended) A method as claimed in Claim 1, in which fresh liquid solvent is added to the second turbulent contactor.

10. (Previously Amended) A method as claimed in Claim 1, further comprising: cooling the mixture after the second turbulent mixing; separating the cooled mixture into a gas phase and a liquid phase; removing the gas phase; subjecting the solvent in the liquid phase to a regeneration treatment to remove the absorbed selected gas component; and recycling the regenerated solvent-containing liquid phase to the mixture.

11. (Currently Amended) A method as claimed in Claim 10, in which the regeneration is carried out by heating, ~~and/or~~ by flashing off the absorbed gas component in a flash tank, or by heating and by flashing off the absorbed gas component in a flash tank.

12. (Original) A method as claimed in Claim 11, in which the post-mixing cooling and the regenerative heating are achieved, at least in part by mutual heat exchange.

13. (Currently Amended) A method as claimed Claim 1, in which the liquid is pumped to ~~the~~ a first turbulent contactor and thereby draws the gas mixture with it through the contactor.

14. (Currently Amended) A method as claimed Claim 1, in which the gas stream is conveyed to a ~~the~~ first turbulent contactor at a high pressure and thereby draws the liquid with it through the contactor.

15. (Currently Amended) ~~Apparatus for carrying out the method of Claim 10,~~ An apparatus for removing a gas component from a gas stream comprising: a first turbulent contactor having a liquid inlet, a gas inlet and a fluid outlet; a second turbulent contactor having at least one fluid inlet and a fluid outlet, at least one of the turbulent contactors comprising a vessel having a gas inlet, a liquid inlet, an outlet leading to a venturi passage, and a tube extending from the outlet back into the vessel; a cooler for the fluid stream from the fluid outlet of the second turbulent contactor; a hydrocyclone or a gravity vessel arranged to separate the cooled fluid stream into a gas phase and a liquid stream; a regenerator arranged to treat the separated liquid stream, and a recycle line arranged to convey the regenerated liquid stream to either the first or second contactor or to a reservoir tank.

16. (Original) Apparatus as claimed in Claim 15, including an annular flow generator between the two contactors.

17. (Previously Amended) Apparatus as claimed in Claim 15, including a pump arranged to supply liquid to the liquid inlet of the first contactor.

18. (Currently Amended) Apparatus as claimed in Claim 15, in which the regenerator is a heater, ~~and/or~~ a flash tank, or a heater and a flash tank.

19. (Currently Amended) Apparatus as claimed in Claim 15, in which the tube is perforated, ~~and/or~~ is spaced from the periphery of the outlet, or is perforated and is spaced apart from the periphery of the outlet.

20. (Previously Amended) Apparatus as claimed in Claim 15, in which the first turbulent contactor is a jet pump.

21. (Previously Amended) Apparatus as claimed in Claim 15, in which the second turbulent contactor is located in a pipe extending from the venturi section of the first contactor.

22. (Currently Amended) ~~The use of~~ A method of using more than one turbulent contactor for selectively absorbing one or more selected gas components from a gas stream, ~~in which~~ comprising: using at least one turbulent contactor to bring the gas stream ~~is brought~~ into contact with a liquid including solvents or reagents for the selected gas components, ~~the~~ wherein an absorption rate of reaction for the selected gas components ~~being~~ is different, thereby causing the selected gas components to be absorbed separately, wherein at least one of the turbulent contactors comprises ~~inges~~ a gas inlet, a liquid inlet, an outlet leading to a venturi passage and a tube extending from the outlet back upstream.

23. (Currently Amended) ~~A use~~ The method as claimed in Claim 22, in which a first selected component is absorbed in a first contactor and a second selected component is absorbed in a second contactor.

24 (Currently Amended) ~~A use~~ The method as claimed in Claim 22, in which the gas stream is at high pressure and the first absorption is instantaneous.

25. (Currently Amended) ~~A use~~ The method as claimed in Claim 22, in which the tube is perforated, ~~and/or~~ is spaced from the periphery of the outlet, or is perforated and is spaced from the periphery of the outlet.

26. (Currently Amended) ~~A use~~ The method as claimed in Claim 22, in which the first contactor is a jet pump.

27. (Currently Amended) ~~A use~~ The method as claimed in Claim 22, in which the second turbulent contactor is located in a pipe extending from the venturi section of the first contactor.

28. (Currently Amended) ~~A use~~ The method as claimed in Claim 22, in which a gas phase and a liquid phase are separated after exit from a first turbulent contactor before entry into a second turbulent contactor, the phase separation preferably occurring in an annular flow generator.